NWS FORM E-5 (11-88) (PRES. by NWS Instruction 10-924)	U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE	HYDROLOGIC SERVICE AREA (HSA) **WFO Jackson, Mississippi**
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH: **July** YEAR: **2010**
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283		SIGNATURE **Alan E. Gerard, Meteorologist In-Charge** DATE **08/16/2010**

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

X **An X inside this box indicates that no river flooding occurred within this hydrologic service area.**

Synopsis...

The month of July was typically hot and humid with scattered showers and thundershowers most days across the Hydrologic Service Area (HSA). The areas with the least amount of rainfall during the month were located in our northeastern counties of Lowndes, Noxubee, Oktibbeha, Clay, Winston, and western Kemper.

The month started with a frontal system over northern portions of the area. The front pushed slowly to the Mississippi Coast by the 2nd. High pressure built into the Gulf South pushing the front into the middle of the Gulf of Mexico by the 3rd. Rainfall ranged from 0.10 to 1.00 inch with higher amounts just over 3.00 inches from the 1st into the 2nd. Showers became more widely scattered to isolated on the 3rd into the 4th. As the high pressure system pulled back to the east on the 5th, a strong southeasterly flow produced scattered to numerous showers and thunderstorms across much of the area on the 6th and 7th. Where rainfall occurred, amounts ranged from 0.50 to 1.00 inch with some higher totals around 3.00 inches, mainly in Southeast Mississippi.

Isolated to scattered showers occurred most each day from the 8th until the 11th. High pressure pushed into the region from the 12th through the 15th with only a few scattered showers over eastern portions of Mississippi.

From the 16th to 19th, high pressure once again pulled back to the east allowing a southerly flow from the Gulf of Mexico. Showers and thunderstorms increased in coverage across the region. The oscillating high pressure pushed back to the west from the 20th to the 23rd depressing shower activity across the HSA. Only isolated to scattered showers were noted.

Tropical Storm Bonnie was in the Southeast Gulf of Mexico on the 23rd. The storm weakened by the morning of the 24th to a depression. Some light to moderate showers and thunderstorms moved into Southeast and East Mississippi on the 24th. Rainfall amounts were 1.50 inches or less. The system moved into Southeast Louisiana on the morning of the 25th bringing some heavier rainfall to portions of South Mississippi. Rainfall totals

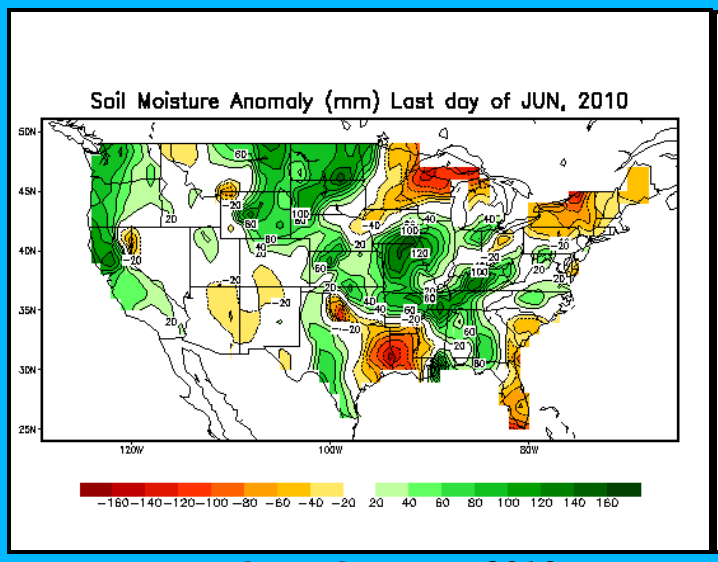
ranged from 0.50 to 3.00 inches. The remnants of Bonnie continued to move westward allowing a southerly flow that kicked off scattered to numerous showers and thunderstorms on the 26th and 27th.

High pressure once again exerted its influence across the HSA from the 28th until the end of the month. Only isolated showers occurred through the end of the month.

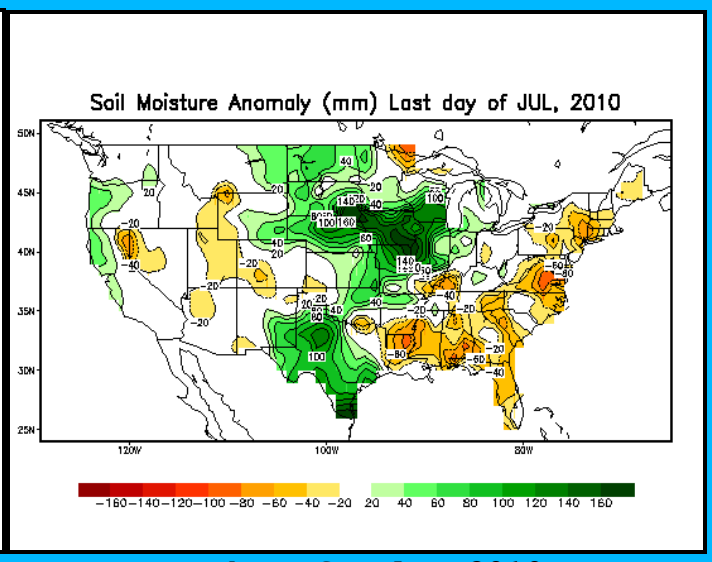
River and Soil Conditions...

The driest areas in the HSA were inside of our northeastern counties where rainfall was 10 to 50 percent of normal. Rainfall was 25 to 75 percent of normal from Southeast Mississippi to the Yazoo Delta Region and in southern portions of Northeast Louisiana. The extreme drought areas of northern portions of Northeast Louisiana did receive some rainfall but not enough to relieve the extreme drought conditions.

Soil moisture stayed the same across Northeast Louisiana with soil moisture deficits continuing to range from 3.00 to 4.00 inches. Soil moisture deficits remained around 3.00 inches across Southeast Arkansas. Soil moisture deficits in Mississippi ranged from 1.00 to 3.00 inches.



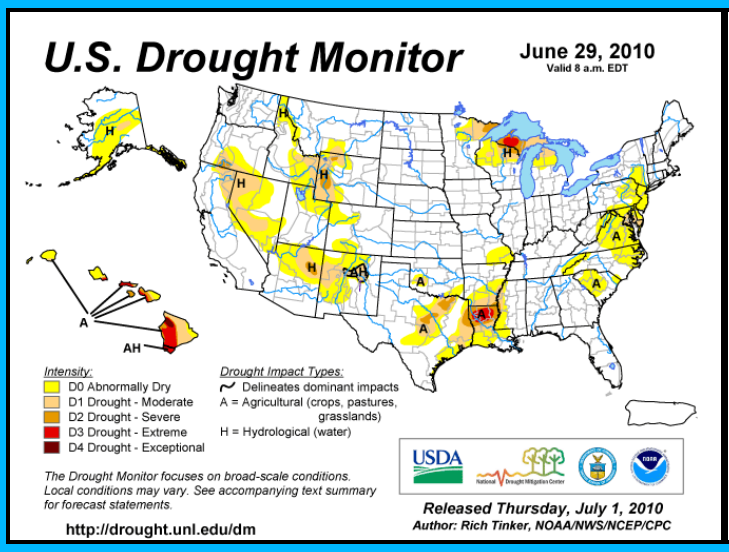
Last day of June, 2010

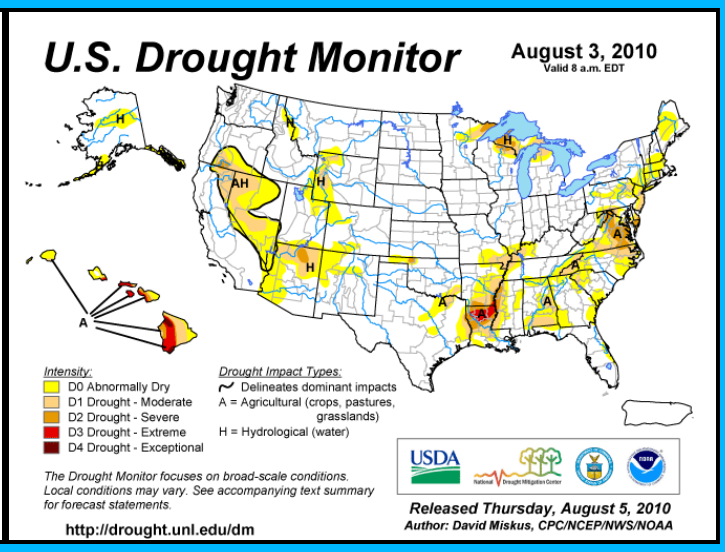


Last day of July, 2010

Soil Moisture anomaly (departure from normal): (25.4mm = 1 inch)

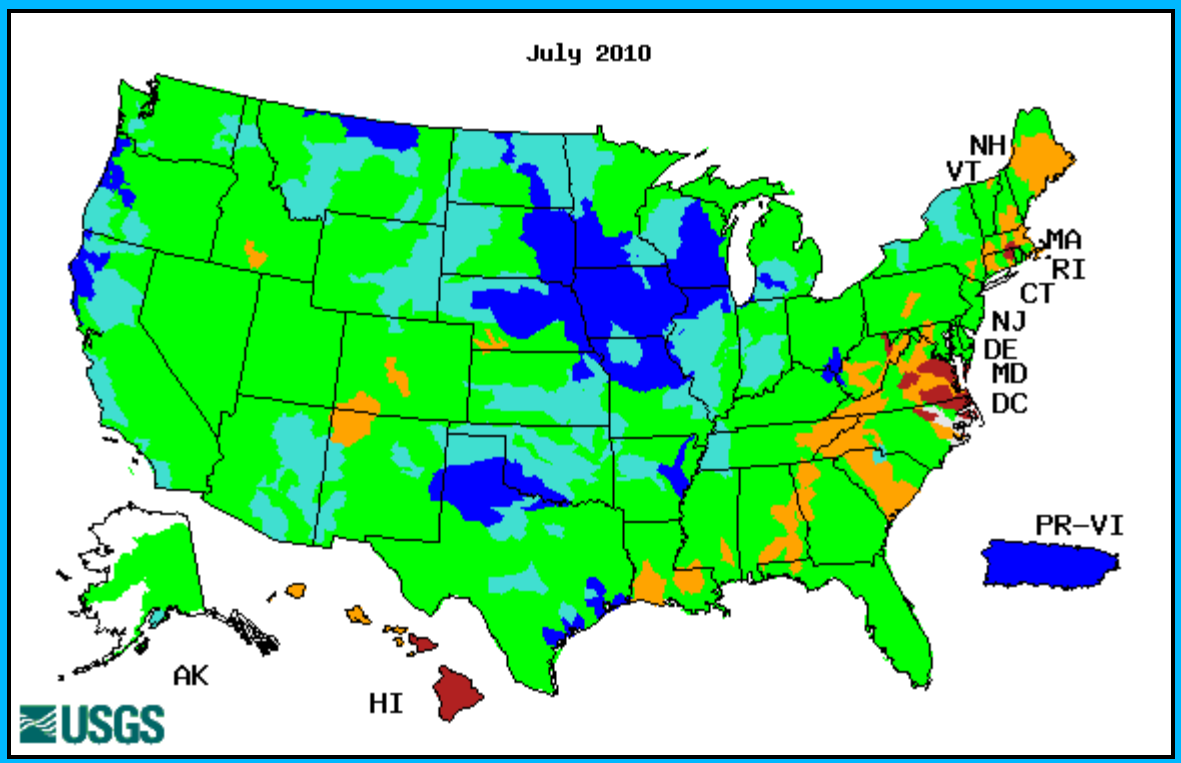
A comparison of the June 29th U.S. Drought Monitor to the August 3rd U.S. Drought Monitor showed extreme drought conditions increasing from northern portions of Northeast Louisiana into extreme West Central Mississippi. Severe drought conditions expanded to the remaining portions of Northeast Louisiana and the Yazoo Delta in Mississippi. Dry conditions during the month allowed abnormally dry conditions were noted over the northeastern portions of Mississippi.

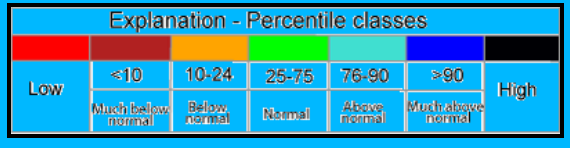




JUNE 29, 2010 AUGUST 3, 2010

The United States Geological Survey's (USGS) July 2010 river streamflow records were compared with all historical July streamflow records. Most river systems showed streamflow in the normal range. In Northeast Louisiana, streamflows were considered in the normal range but continue to approach below normal conditions as dry conditions continue. A portion of the Pascagoula River system was below normal.





With the scattered nature of the rainfall during the month, only little changes to minor rises occurred across the river systems in the HSA.

The Mississippi River continued to recede during much of the month.

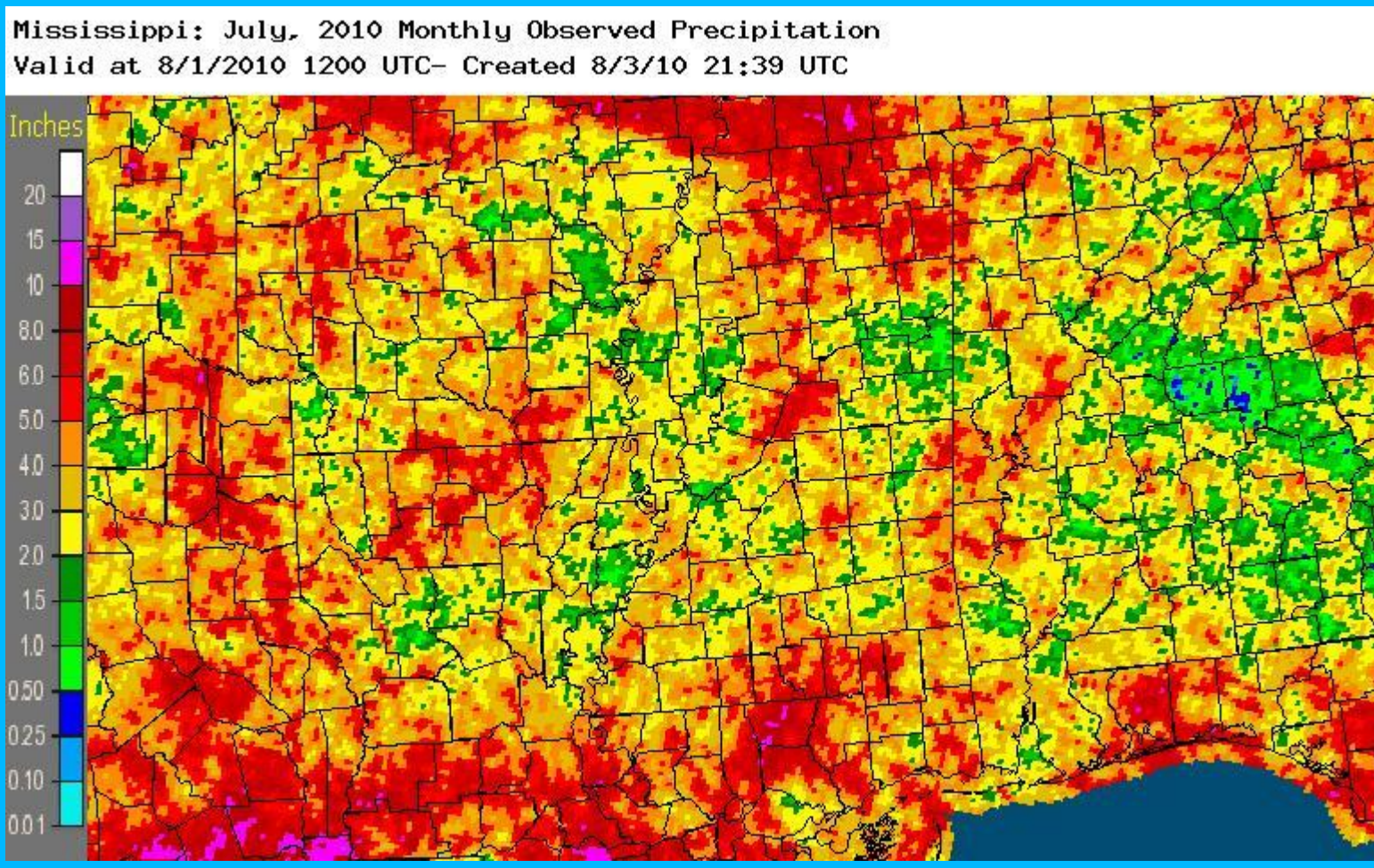
Based on current soil moisture conditions, current streamflow conditions, and an expected above normal rainfall over southern portions of the HSA and near normal over central and northern portions of the HSA, the flood potential for next 60 to 90 days is expected to be:

***Pearl River System*:**	**Below normal.**
***Yazoo River System*:**	**Below normal.**
***Big Black River System*:**	**Normal.**
***Homochitto River System*:**	**Below Normal.**
***Pascagoula River System*:**	**Normal.**
***Northeast LA and Southeast AR*:**	**Below Normal.**
***Tombigbee River System*:**	**Below Normal.**
Mississippi River:	**Normal.**

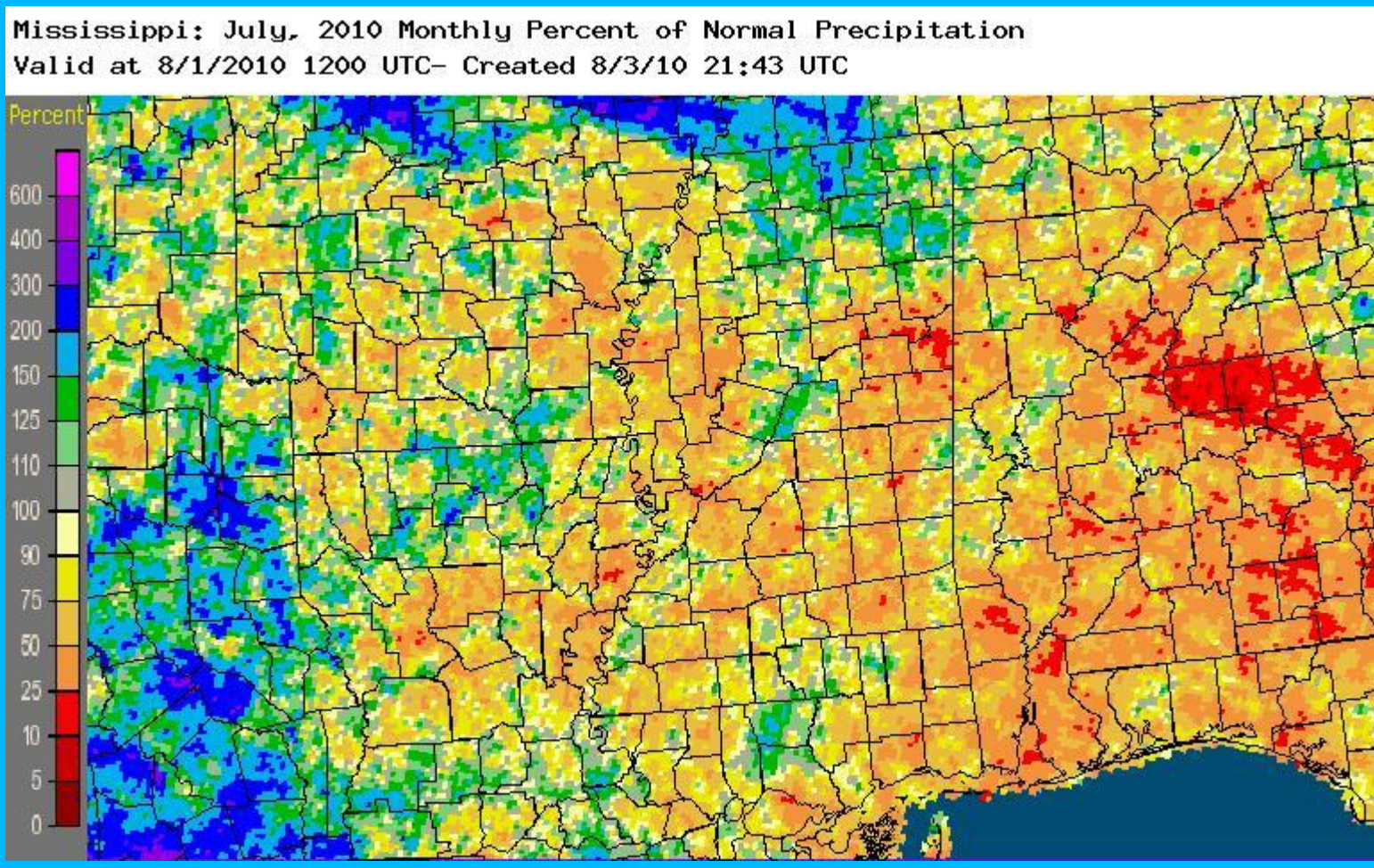
Rainfall for the month of July

The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on June 30th until 7 am on July 31st were: 8.76 inches at Kosciusko, MS; 8.63 inches at Belzoni, MS; 8.20 inches at Raleigh, MS; 8.18 inches at Pat Harrison Waterway's Dunn's Falls Waterpark, MS; 8.03 inches at Sumrall, MS; 7.51 inches at Columbia, MS; 7.04 inches at Monticello, MS; and 7.03 inches at Crystal Springs, MS.

The lowest rainfall totals in the HSA were 0.92 inches at Satartia, MS; 0.96 inches at Columbus, MS; 1.06 inches at Leland, MS; 1.08 inches at Laurel, MS; and 1.22 at Tibbee, MS.



July 2010 Rainfall Estimate



July 2010 Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

July rainfall for Selected Cities...

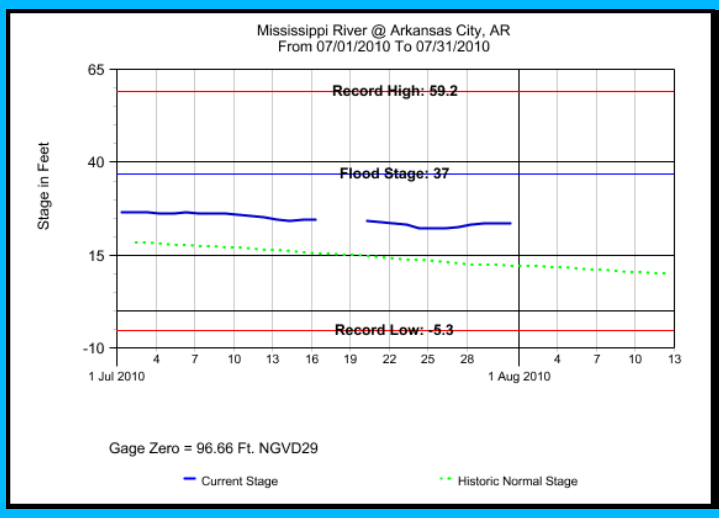
City (Airport)	July Rainfall	Departure from normal	2010 Rainfall	2010 Departure from Normal
Jackson, MS	3.30	-1.39	26.98	-8.28
Meridian, MS	2.44	-3.01	28.93	-9.20
Greenwood, MS	2.13	-2.06	24.73	-6.35
Greenville, MS	1.01	-2.94	M	M
Hattiesburg, MS	5.91	+0.27	27.34	-7.24
Vicksburg, MS	4.68	+0.76	15.65	-15.65

* Vicksburg rainfall for May corrected and thus year totals and departures have been restored.

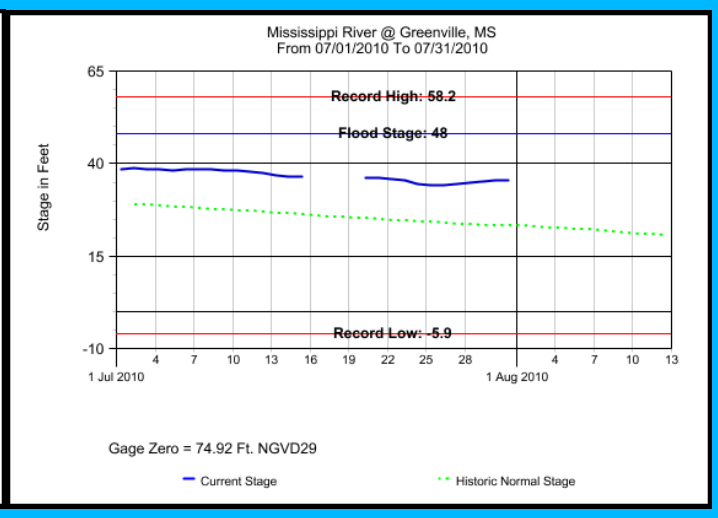
Mississippi River...

Mississippi River Plots for July, 2010

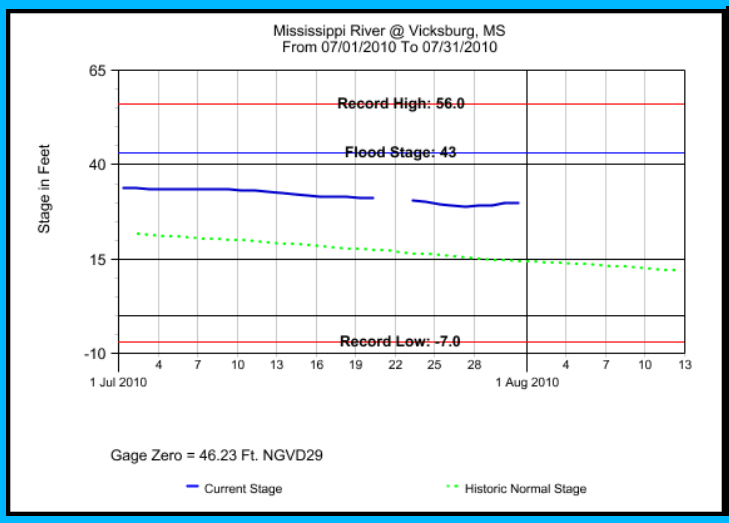
Plots Courtesy of the United States Army Corps of Engineers



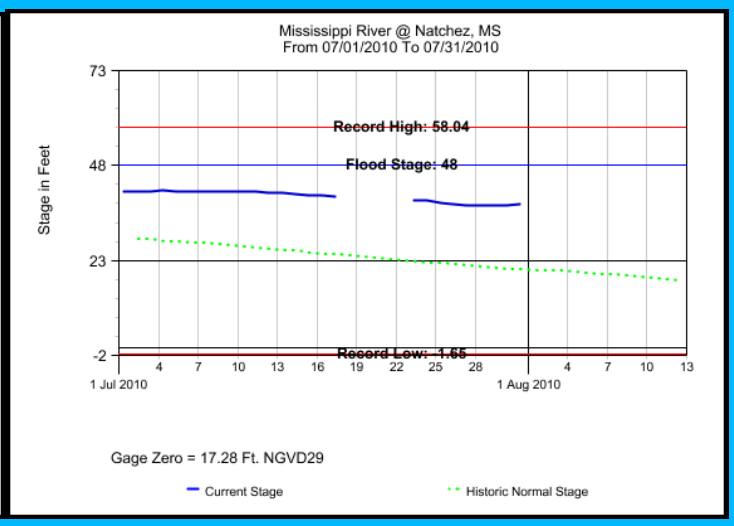
Arkansas City, AR



Greenville, MS



Vicksburg, MS



Natchez, MS

Preliminary high and low stages for the month:

Location	FS	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	37	26.72	07/01/10	22.24	07/26/10
Greenville, MS	48	38.88	07/01/10	34.16	07/26/10
Vicksburg, MS	43	33.81	07/01/10	28.87	07/27/10
Natchez, MS	48	41.34	07/04/10	37.28	07/28/10

Total Flood Warning products issued: 0
Total Flood Statement products issued: 0
Total Flood Advisories MS River : 0
Daily Rainfall Products (RRA'S) issued: 31
Daily River Forecast Products (RVS'S) issued: 31
Daily River Stage products (RVA'S) issued: 31

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Service Hydrologist

&

Latrice Maxie

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Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District